STAKEHOLDER INVOLVEMENT AND PUBLIC OUTREACH STRATEGIES IDENTIFIED FROM WATERSHED COUNCILS IN OREGON

by

CHU CHEN

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Dr. Richard D. Margerum, Chair of the Examining Committee

8/25/2005
Date

Committee in charge: Dr. Richard D. Margerum, Chair
Dr. Patricia F. McDowell

Accepted by:

Dean of the Graduate School

An Abstract of the Thesis of

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Title: STAKEHOLDER INVOLVEMENT AND PUBLIC OUTREACH STRATEGIES IDENTIFIED FROM WATERSHED COUNCILS IN OREGON

Approved:_____

Dr. Richard D. Margerum

Watershed councils in Oregon have been created and developed for collaborative watershed management since the 1990s. Although a lot of research has been conducted to examine the conceptual framework and practical experience of watershed councils, there have been fewer investigations of the outreach and education strategies used by watershed councils. The goal of this study is to identify the range of outreach strategies that have been used by watershed collaboratives and discuss how these strategies relate with councils focused at the organizational level compared to those focused at the action level. OWEB grant applications provide the major source of data for examining a sample of eighteen among more than ninety watershed councils in Oregon.

The study results reveal that watershed councils' outreach strategies include direct involvement and public outreach. The planning of outreach is incorporated into mission statements, organizational governance, board member representatives and recruitment, decision-making processes, meetings, community events, watershed events, invitation and tracking, and outcome measures. Action and organizational groups use similar public outreach approaches but adopt different direct involvement strategies. Action councils rely more on direct involvement from participants in the community, while organizational councils are more likely to use partnerships to achieve their involvement goals.

Three themes emerged from this research. Organizational councils need to create "in-group" awareness and connectivity to their watershed communities since these councils lack a sense of place-based identification. Social networks are important for action councils' outreach and education, but organizational groups depend more on inter-organizational networks. Lastly, multiple levels of public participation are realized in the implementation of outreach strategies by watershed councils in Oregon.

CURRICULUM VITAE

NAME OF AUTHOR: Chu Chen

GRADUATE AND UNDERGRADUATE SCHOOLS ATTENDED:

University of Oregon, Eugene
University of Xiamen, Fujian, China

DEGREES AWARDED:

Master of Science in Environmental Studies, 2009, University of Oregon
Master of Arts in Environmental Literature, 2007, University of Xiamen
Bachelor of Arts in Chinese Language and Literature, 2004, University of Xiamen

AREAS OF SPECIAL INTEREST:

Collaborative Environmental Management
Environmental Nonprofit Organizations

PROFESSIONAL EXPERIENCE:

Gradate Teaching Fellow, Environmental Studies Program, University of Oregon, 2008-2009

ENVS Graduate Capstone Project on Sustainability and Residential Life, Sustainability Office, University of Oregon, 2008

Gradate Teaching Fellow, Oregon Chinese Flagship Program, University of Oregon, 2007

GRANTS, AWARDS AND HONORS:

Fighting Fund Fellowship, 2007-2008

Donald and Coeta Baker Foundation Fund, 2007

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CHAPTER I

INTRODUCTION

What Is a Watershed and Why Does It Exist?

This study is built on two fundamental terms: "watershed" and "watershed council." According to the Network of Oregon Watershed Councils (NOWC 2009b), "A watershed is typically defined as the area of land where all precipitation drains to a common water body, such as a river or lake." The boundary of a watershed is shaped by the land around, often by "buttes and ranges," since water flows downstream (NOWC 2009a). A watershed can be small or large, depending on the size of the body of water involved. It could be areas around a tributary, a section of the main stream, or the whole stream. In other words, a larger watershed is always comprised of several subwatersheds.

Seen from above, a watershed is a system or a subsystem of a larger system, and all its parts are interactive and associated with the whole. When water runs downriver, all activities that affect upstream water will consequently influence downstream water. For this reason, hydrologic management needs to be considered at the watershed level. And all the people living, staying or working in a watershed should cooperate to solve watershed issues and maintain its health.

What Are Watershed Councils and Why Do They Exist?

To support watershed-level action, local watershed groups called watershed councils are established. The Oregon Watershed Enhancement Board (OWEB) defines watershed council as "a voluntary local organization designated by a local government group convened by a county governing body to address the goal of sustaining natural resource and watershed protection and enhancement within a watershed" (OWEB Watershed Pages 2009b). Firstly, a watershed council is a local, voluntary watershed group. Secondly, it is appointed by a county commission and probably financially supported by OWEB. In addition, a watershed council is required to represent diverse interests within its associated watershed, which often include, but are not limited to, representatives from local agencies, Indian tribes, public groups, private landowners, industry, academic communities, and state and federal agencies (Oregon Revised Statute 541.388 2009).

The primary motivation for the establishment of watershed councils is that a new strategy for watershed management is needed. Agencies, nonprofit organizations and watershed communities realized the potential value of watershed councils. Historically, House Bill 3441, passed by the Oregon Legislature in 1995, confirmed the legitimacy of the Watershed Council in Oregon. In addition, the establishment of a watershed council is a decision made by local government, such as a city or county. Once established, watershed councils plan and implement on-the-ground projects, educate the community,

and partner with different interest groups (NOWC 2009a). Through these activities, the councils promote holistic considerations in watershed management, associate watershed health with community benefits, balance the diverse interests involved and ensure public participation. In short, watershed councils are valuable for the watershed, the local community, and decision-makers.

Watershed Councils in the U.S. and China

As a recent strategy of watershed management, watershed partnerships or collaborations have been applied since the nineteenth century because of the complexity of watershed issues and the inevitable conflicts arising issues surrounding development, environmental quality, conservation of natural resources, and the community. As an example of locally based collaboration, a watershed council is an effort to solve the problem. In the U.S., along with the emergence of the new words of "watershed protection and restoration" in the 1990s, the approach and techniques used by watershed councils have moved towards more comprehensive consideration and management (Lavigne 2004, 2). For example, watershed councils have "existed for 30-50 years in many northeast watersheds," and often have a 20- to 25-year history in the East (Lavigne 2004, 4-5). Watershed councils in Oregon are not only organized in a unique way, but also enable community-based decision-making and community participation.

Watershed management has become more and more significant in China, the experience of watershed councils in Oregon would be useful and helpful for watershed

management in China. Currently, more and more NPOs participate in watershed management in China. Though most of them are formed as single nonprofit organizations, collaboration has not been recognized as an effective tool for environmental management. Affiliation with agencies has not been valued, but rather seen as an obstacle for NPO development and natural resource management. Therefore, this study of watersheds will explore a positive application of collaboration in environmental management and identify several effective strategies and approaches by examining eighteen watershed councils in Oregon.

Existing Research on Watershed Councils in Oregon

Three categories of social science research have been conducted on watershed councils in Oregon. Several research studies have examined the conceptual foundations on which watershed councils have been built—e.g., "community-based adaptive watershed management," "ecosystem management," "new strategies for America's watershed" and "watershed thinking" (Committee on Watershed Management, Water Science and Technology Board, Commission on Geosciences, Environment, and Resources, National Research Council 1999; Habron 1999; Yaffee et al. 1996). Some research focuses on selected watershed councils, evaluates their accomplishments and operational difficulties, projects, and strategy implementation, and identifies the factors of success and obstacles (Huntington and Sommarstrom 2000). Some other studies pay more attention to land use activities and discuss the effect on landowners' understanding

of issues and their behavior vis-à-vis watershed councils (Margerum 1999; Rosenberg 2005; Smith et al. 1997), which are conducted based on the theory of planned behavior (Ajzen 1985).

Thesis Question and Hypothesis

Little research has been conducted concerning the strategies that watershed councils use to involve stakeholders and public. This study will do some exploratory work in this field. This study asks the following thesis question: What are the strategies that can be used to involve stakeholders and the public? To answer this question, two subquestions are presented:

1. What is the range of strategies that can be identified from watershed councils in Oregon?

2. How are these strategies related to councils focused at the organizational level compared to those focused at the action level?

CHAPTER II

RELEVANT LITERATURE

Collaborative Natural Resource Management

Definition and Principles of Collaboration

Definitions of collaboration have evolved as it has been applied and recognized by more and more agencies/organizations and individuals. Gray's (1985, 1989) definitions reveal that collaboration is a collective effort to solve a problem. Subsequent research has become more aware of practical principles of the collaborative process, contending that collaboration should be a sustained commitment (National Assembly of National Voluntary Health and Social Welfare Organizations 1991, 1) and an "interactive" process "using shared rules, norms and structures" (Wood and Gray 1991, 169). A recent definition by Margerum emphasizes consensus-building and the development of guidance for implementation, as well as "a deliberative process" (Margerum 2006, 3). Collaboration is not only a process, but also an approach.

On the basis of the definitions above, several essential elements are indispensable, including diverse participants, a common/shared mission, and a "sustained," "interactive" and "formal" process "with shared rules/structure." Accordingly, several important principles might help make a more effective

collaboration. At first, it is very important that participants are aware of the necessity of collaboration, as well as common problems and the mission. Secondly, the diversity of representatives should be ensured, as well as their equal access to power/resources/information. Basically, a formal structure and rules can allow collaborative processes to go forward. Lastly, we should keep in mind that collaboration is a time-consuming process, so the monitoring of outcomes is valuable.

Typology of Collaboration

There are different typologies of collaboration. Moore and Koontz (2003) distinguish groups as government directed, citizen directed and hybrid based on the sponsorship involved. Cheng and Daniels (2005) discriminate between different types of collaboration by "scale." They argue that a more direct relationship between a watershed and community is available for a small-scale watershed than a large one (Cheng and Daniels 2005).

Margerum categorizes collaborations as action, organizational and policy groups, in terms of the level at which the group operates (Margerum 2006, 4). According to Margerum, groups at different levels identify different priorities (direction action, organizational issues, government policies), cover different scales, have different scales of institutional settings, have different participants and pose distinct problems at different levels (Margerum 2006, 4-5). This study draws on the experience of Margerum's A-O-P typology through choosing and analyzing different types of

watershed councils, including those focused on the action level and organizational level. The analysis includes identification of the stakeholder involvement and public outreach strategies they use, and compares how these strategies relate to the different types of councils.

Why Does Collaboration Emerge in Natural Resource Management and Why Do We Need It?

Under the background of destruction of natural resources since the nineteenth century, a new approach for pollution control and nature protection is in demand. Cortner and Moote (1999) list the various roots of the emergence of "ecosystem management," including public support of environmental protection, political decentralization and a market approach in resource conservation, ecosystem science development, and the experience of new resource-management programs (20-27). All of these changes made the new initiative of environmental collaboration possible.

In addition, society needs collaboration because it helps us to solve problems and improve current situations. Firstly, it helps build better understanding of the issues among agencies and the public, through sharing information, learning from the public, educating the public, and joint research (Wondolleck and Yaffee 2000, 23-35). Even more important, it "reaches across the great divide connecting preservation advocates and developers, commodity producers and conservation biologists, local residents, and national interest groups to find working solutions to intractable problems that will surely languish unresolved for decades in the existing policy system" (Snow 2001, 2).

Also, collaboration helps us make wiser decisions by taking the public interest, even conflicts, into consideration and thus acquire more support for it. In practice, it provides a mechanism for coordinating, mobilizing resources and management. Lastly, it inspires agencies, organizations and communities to develop their capacities (Wondolleck and Yaffee 2000, 41-46).

Decision-Making Process in a Collaboration

According to McKinney (2001), there are four basic approaches for making decisions or resolutions. The first is a power-based procedure, making decisions by using coercion. The second is to rely on some fair, objective and recognized rules, like policies or laws. The third one is to encourage decision-making through reconciling conflicts of interest. Consensus-building is an example of this, to reconcile interests among different stakeholders. The last one is for decision-makers to consult the public during the decision-making process (McKinney 2001, 33-36)

Among these approaches, consensus-building is the typical method that community-based grassroots movements often use. It seeks "unanimous agreement," which differentiates it from other approaches. In contrast, voting is an example of a power-based procedure in which the majority rules the decision (McKinney 2001, 35).

If we focus on the consensus process in watershed collaborative, three critical recommendations arise from the literature. First, diverse interests and qualified stakeholders are supposed to be present to vote, including competing interests (Kaner

1996, 145; Margerum 2006, 6; Straus 1999, 138;). Straus even suggests an "outreach track" (Straus 1999, 165) to attract a more general public as well, thus eliciting more support for the result because they feel their contribution within.

Then a structure with objective principles for decision-making is suggested (Kane 1996; Straus 1999). The structure or framework could be a temporary committee, like a watershed council's board of directors. And neutral and standardized rules should be identified and followed by all participants. For example, if the consensus fails, as mentioned in Straus's decision-making track, a majority vote could be an option (Straus 1999, 163).

The last advice is bargaining beyond your position, such as a type of "principled negotiation." Participants are encouraged to focus on interests rather than positions, so that it is more likely to produce a broadly acceptable solution (Fisher and Ury 1981). In short, a successful consensus needs high-quality stakeholder representatives, a standardized structure, and a positive attitude based on interests to produce a solution.

Public Outreach in a Collaboration

Watershed collaboration is a model of public involvement in ecosystem management. The general public is affected by a watershed, though they may not have a vote in decision-making. They are supposed to be the important players in watershed collaboration as well as those stakeholders serving on boards of councils. However,

compared to decision-making, much less research has explored the approaches or model of public outreach, although extensive efforts have been made in practice.

Several researchers conducting studies on educational outreach regarding watershed issues believe a comprehensive pedagogy could work toward facilitating watershed management. Public involvement "often starts by informing and educating citizens" through "press releases, videos, public service announcements, and public meetings" (McKinney 2001, 35). And watershed public outreach could be implemented with diverse approaches, either by high-tech or low-tech methods, academic education or street art forms.

Both Internet-based distance education (Zandbergen, Brown, and Schreier 2005) and lower-tech methods like designing and developing a poster in an interactive process (Chandler 2005) are recommended, depending on the different development of technologies in a particular society. Both of the two forms are used to improve the environmental consciousness of a wider audience and engage them in environmental protection.

Both academic education and street art could be used by a watershed council to promote public environmental education. For example, a design/build teaching model enables universities to make contributions to communities' watersheds, including design/build studio/workshop, on-site projects and service learning experience (Winterbottom 2005). Public art by local artists and in public art venues can help expand images of a watershed, to encourage all of the participants to become

spokesmen for the watershed and so that the information can reach the largest possible audience.

In addition, some more theoretical research studies have been conducted. Bonnell summarizes four models of education outreach. "Future search" process helps develop a shared vision, "open space" emphasizes self-organizing of the communities, "collaborative learning" can be accomplished by training sessions, interactive learning, communication, discussion and other components, and appreciative inquiry works like a process of innovation diffusion flowing through engaged public networks (Bonnell and Bowling 2005, 150-51). All these models could be applied to guide specific approaches of public outreach in watershed collaborative.

Social Networks and Organizational Networks in Collaborations

Social Network Analysis (SNA)

Social network analysis (SNA) emerged from the efforts of stakeholder analysis, since it is realized that a communication network is the solution to understanding stakeholder relationships in a collaborative. SNA in the environmental management field is in its first stages of development. It helps to reveal the value of social networks and factors involved in establishing effective networks for collaborative natural resource management.

Social networks are "comprised of actors who are tied to one another through socially meaningful relations" (Prell, Hubacek, and Reed 2009, 503). According to the

strength of ties, a social network could be a strong or weak tie. As represented by many studies, social networks with stronger ties "would increase the likelihood of collective action and successful natural resource management" (Prell, Hubacek and Reed 2009, 502).

The reason for this conclusion is that individuals sharing a strong tie are more likely to influence one another, share common understanding of issues, support and help each other, have better communication when facing complex situations, and trust each other (Coleman 1990; Crona and Bodin 2006).

Successful natural resource management would also be more likely because group identification affects individuals' behavior, since it encourages members to "attribute loyalty and a sense of belonging to the group" (Cheng and Daniels 2005, 1), so that members tend to judge themselves or other people based on the evaluation of the group to which they belong (Shibutani 1995). Moreover, their perception of a watershed is associated with their identification with the watershed community (Cheng and Daniels 2005), and they are driven to make social action by group identity (Turner 1982).

In short, individuals who have interpersonal links and share a common group identity are more likely to form consistent understanding of issues and behave collectively (Brewer and Kramer 1986; Kramer and Brewer 1984).

Organizational Networks in Collaborations

In addition, another network occurring from collaborative literature is the organizational network. Recently, Ansell and Gash (2007) define interorganizational collaboration as "a governing arrangement where one or more public agencies directly engage non-state stakeholders in a collective decision-making process that is formal, consensus-oriented, and deliberative and that aims to make or implement public policy or manage public programs or assets" (544). Since interorganizational networks research has bloomed during the past decade, four main themes have emerged: network process, network development, network governance, and network outcomes.

Network process here means different forms of relationship between organizations participating in a network, depending on its "density and centralization" (Provan, Fish, and Sydow 2007, 502). The development of network is argued by researchers to be dependent on both individuals and the mechanism of a network. The mechanism includes rules, knowledge, goals and forms, which are agreed to by all organizations to facilitate the process (Provan, Fish, and Sydow 2007, 503). In addition, three types of governance within networks are identified: shared governance, governance by a lead organization, and governance by an NAO (Provan, Fish, and Sydow 2007, 504). Lastly, network outcomes primarily include network effectiveness and learning.

Using this research as a basis, Margerum (2006) reveals four factors that are related to successful organizational network implementation: external influences,

support, sharing of power, and coordination procedure. Successful implementation is more likely for an organizational network if there are greater pressures and incentives, greater support from organizations or agencies involved, more power shared among participating organizations or agencies, and more efforts to facilitate communication and decision-making among participating organizations or agencies (Margerum 2006, 7).

Change Agency/Agent

Position of individuals or organizations/agencies within a network "can affect how information and resources circulate and get exchanged in the network" (Provan, Fish, and Sydow 2007, 504). Some actors identified as "change agents" play more influential roles than other network members (Rogers 1995, 337) in the process of informing, education, communication and persuasion.

These "change agents" often are "highly (degree) central stakeholders" who have more direct connections to others. They "can be trusted to use their links to diffuse information and potentially mobilize the group to action," so that they play important roles to mobilize the network and bring stakeholders together (Provan, Fish, and Sydow 2007, 504). "Change agents" also could be stakeholders holding "high betweenness centrality," who "rest between two others who are themselves disconnected" more frequently. This type of "change agent" is especially important for bringing diverse and

new ideas to the network and long-term natural resource management (Provan, Fish, and Sydow 2007, 504).

In addition, concerning the interorganizational networks, there are also some key organizations that play more influential roles than other participants. The major/leading organizations are those that hold high degree centralization or that have been directly connected to other organizations for longer. They influence network development through shaping network mechanisms. They contribute time, resources, and energy to the process of network evolution, educating other participating stakeholders, and then producing mechanisms for all of the participants (Provan, Fish, and Sydow 2007, 503).

What This Thesis Will Add to the Existing Literature

This study would like to add several complements to the existing literature of natural resource management collaboration, concerning strategies of decision-making and public participation, and the applications of social networks and organizational networks in collaborations.

This study researches what kinds of decision-making approaches and resolution rules are used by watershed collaborations, with the intent of furthering understanding of the application of decision-making literature in natural resource management collaborative. Second, there is relatively little literature on public participation in natural resource management currently. This thesis focuses on outreach strategies used by watershed councils, and does so by listing, grouping, and comparing. In addition,

Rogers (1995) identified several roles of a "change agent" (individual) in the process of diffusion of innovation. This study researches how social networks and organizational networks influence stakeholder involvement and public outreach in different types of watershed collaborations. Lastly, the analysis of watershed councils will help specify the effect of "change agents" or key organizations in the process of watershed collaboration.

CHAPTER III

METHODOLOGY

Chapter Overview

This study attempts to answer the following thesis question: What are the strategies that can be used to involve stakeholders and the public? Answering this requires asking two subquestions:

1. What is the range of these strategies that can be identified from Watershed Councils in Oregon?

2. How are these strategies related to councils focused at the organizational level compared to those focused at the action level?

Concerning these questions, a sample for this study needs to represent different types of watershed councils. One way to address this issue is by determining landownership, so the sampling is based on landownership of watershed. Data concerning these selected watershed councils are primarily the result of a search of Oregon Watershed Enhancement Board (OWEB) grant applications from 2009-2011; these data were then organized to answer questions posed by this study. Additionally, organizational websites provide supplementary information. The subsequent data analysis includes identifications and comparisons.

Sampling

There are about 90 watershed councils in Oregon, and the 18 cases including different types were selected from the 64 councils that filed OWEB grant applications. To distinguish the different types, this study chose cases based on landownership, resulting in three groups of watershed councils (see Figure 1).

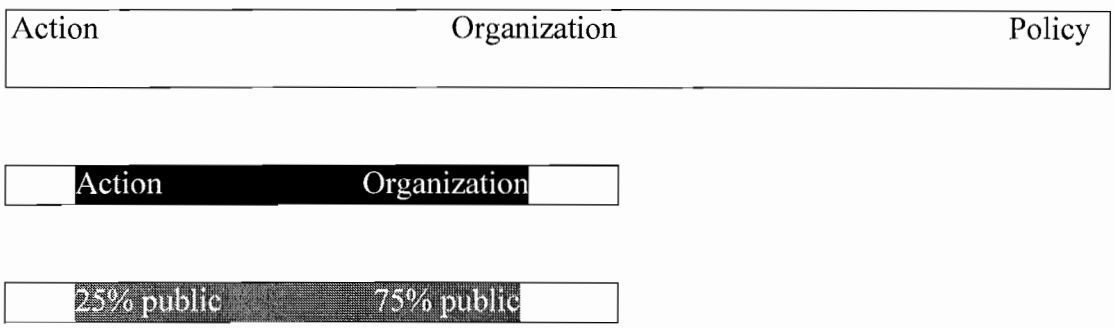

FIGURE 1. Spectrum of watershed councils.

As seen in Figure 1, the three groups representing different landownership also represent different types of watershed councils. Group 1, whose watersheds are primarily private, represents the action group. In contrast, Group 2 includes councils whose watersheds are primarily public, and represents the organizational group. Finally, Group 3 represents the in-between group. Six councils were chosen for each group (see Table 1).

TABLE 1. Watershed Councils Examined in This Research

Group 1, Private > Public, Action Group	Watershed Council (WSC) Name	Percentage of Publicly Managed Land
	Calapooia WSC	<25% (6%)
	Johnson Creek WSC	<25% (5%)
	Long Tom WSC	<25% (8%)
	Tualatin River WSC	<25% (7%)
	Yamhill Basin Council	<25% (11%)
	Walla Walla Basin WSC	<25% (10%)
Group 2, Public > Private, Organizational Group	McKenzie Watershed Council	50-75% (70%)
	Upper Deschutes Watershed Council	50-75% (0.70)
	Harney County Watershed Council	50-75% (75%)
	Sandy River Basin Watershed Council	50-75% (76%)
	Nestucca-Neskowin Watershed Council	50-75% (70%)
	Applegate Partnership & Watershed Council	50-75% (70%)
Group 3, Public ≈ Private, In-Between Group	Little Butte Creek Watershed Council	25-50% (48%)
	Partnership for the Umpqua River	50-75% (54%)
	Powder Basin Watershed Council	25-50% (55%)
	Seven Basins Watershed Council	25-50% (40%)
	Siuslaw Watershed Council	50-75% (59%)
	Middle Rogue Watershed Council	50-75% (61%)

Meanwhile, all the watershed councils in this research study have official websites. A website is a basic outreach effort, so it ensures that all of the cases stand at a similar level of outreach vision, and a website is convenient for gathering extra

information about the councils. Moreover, all the cases chosen are nonprofit organizations, most of which are 501(c)(3) groups.

Data Sources

OWEB Grant Applications filed from 2009-2011 were the major resource for this study. The official websites serve as additional back-up, mainly providing organizational mission statements, charts, bylaws, organizational structure, projects of these groups and so on.

Related to this topic of stakeholder involvement and public outreach, OWEB Grant Application's Questions 14 and 15 in Section III, "Accomplishments" in Section V, and attachment of "Board Members" are especially significant. At first, Question 14 is stated as follows:

> Briefly describe how the council is organized and governed, including how the council makes decisions and resolves differences of opinion. Include a description of the decision making body, committees, or other watershed working groups and how members are recruited and retained. If the application will fund a coordinating council, describe its make-up, roles and responsibilities, and its relationship to the individual councils. (Oregon Watershed Enhancement Board grant application 2009-2011)

This question asks about organization and governance, decision-making processes and difference resolving, and member recruitment. To answer this question, every council gives a description of its direct stakeholder involvement. Question 15 asks, "What steps are the council taking to increase citizen participation?" Its answer provides details about public outreach tolls and implementation.

Outcomes measures in the "Accomplishments" section shows what projects are related to education and outreach, details public input, and represents how the councils measure these inputs. In addition, the Council Member attachment presents a list of board members' names, with the organizations/interest represented by them. It also contains important information about direct involvement, especially stakeholder diversity.

Data Analysis

All the information from the data above will help analyze the strategies of direct involvement and public outreach by selected watershed councils. Every strategy will be examined through identification of its various approaches. Firstly, the stakeholder involvement will be measured by mission, structure, board member diversity, board member recruitment and decision-making process. The public outreach will be examined through forms of meetings, community events, watershed events, invitation and tracking, and measures of outcomes.

Methods of the analysis primarily include identification and comparison. Common strategies used by all the three groups will be identified and recorded as a range of strategies that could be used by watershed collaborations and other environmental nonprofit organizations. Meanwhile the three groups will be compared in terms of their different forms of outreach strategies that might be related to their

typology. Both identification and comparison will help deepen our understanding of watershed councils' outreach strategies.

Process of Analysis

Research is a revolutionary process, often including data-reading, repeated analysis, and perception and organizing of the results. This study follows a process of four rounds, composed of several repeated processes.

In the first round, four watershed councils in two groups were chosen based on landownership. A general category of stakeholder involvement and public outreach was identified and several approaches were recorded in notes. More cases were added during the second round, and an initial framework for case analysis was produced.

In the next round, three groups of cases (three for each group, resulting in a total of nine cases) were organized after a comprehensive overview of watershed councils in Oregon. The initial framework changed accordingly, allowing a comparison among three groups. As a result of all the previous research, a modified thesis question and hypotheses were confirmed, a valuable theme arose, and an applicable model was framed. Subsequently, nine more cases were added (three for each group) to complement and refine the framework, a potential model of public participation in watershed council. Therefore, the current thesis results were made by examining 18 watershed councils under a refined framework.

CHAPTER IV

BRIEF DESCRIPTIONS OF CASES

There are about 90 watershed councils in the state of Oregon (see Figure 2). A sample of 18 has been selected for this study. This chapter provides brief descriptions of these watershed councils (see also Table 1). Information for each council includes watershed location, size and landownership of the watershed, as well as the history, nonprofit status, and mission of the councils.

Group 1 includes six watershed councils, less than 25% of whose land is publicly managed. The Calapooia Watershed Council is the council governing the Calapooia River. The Calapooia River processes from the western Cascade Mountains and reaches the city of Albany in western Oregon, where it joins the Willamette River. The watershed covers 233,897 acres primarily in Linn County, 94% of which is privately owned. The Calapooia Watershed Council was created in 1999 and became a 501(c)(3) nonprofit group in 2008. It has the following mission statement: "providing opportunities for membership to cooperate in promoting and sustaining the health of the watershed" (Calapooia Watershed Council).

Johnson Creek Watershed Council is the council for the Johnson Creek Watershed. Johnson Creek leaves its headwaters near the Sandy River, passes four cities (Gresham, Portland, Milwaukie, and Happy Valley) and two counties (Clackamas and

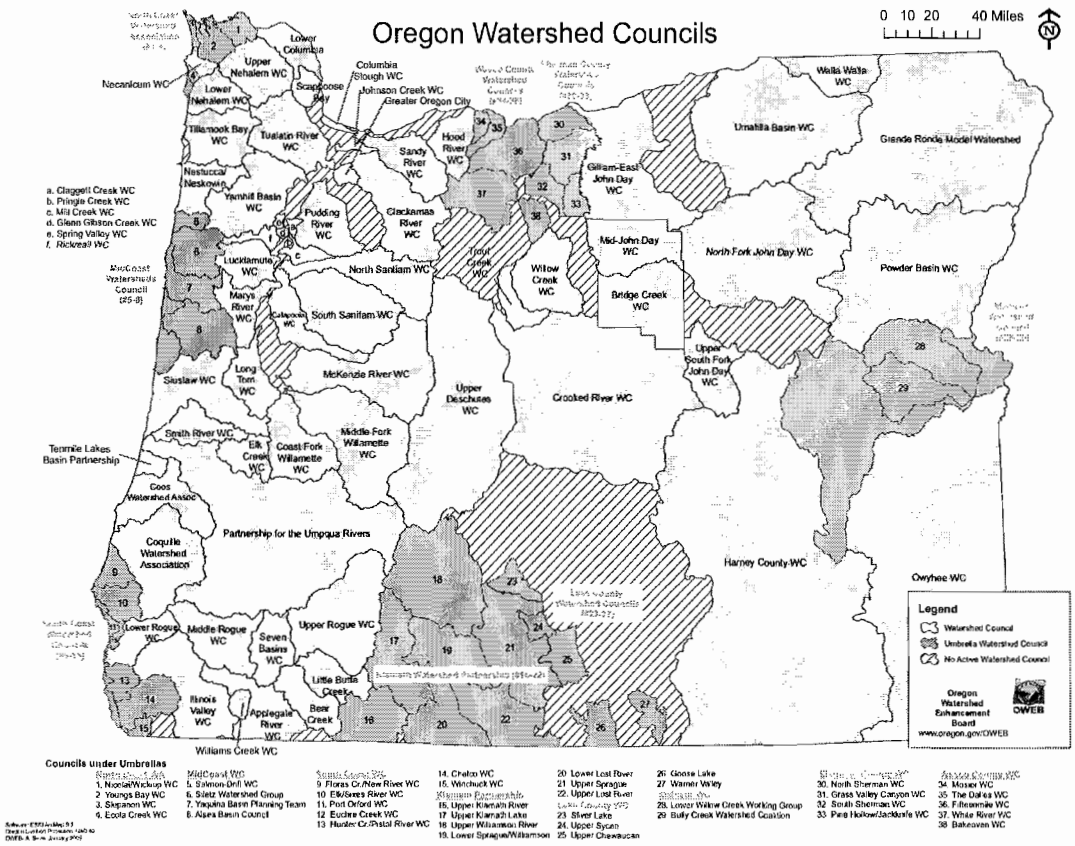

FIGURE 2. Oregon watershed councils.

Multnomah) and finally joins the Willamette River. The watershed has 34,560 acres, 95% of which is privately owned. The Johnson Creek Watershed Council was formed in 1994, and became a 501(c)(3) nonprofit organization in 2001. It has the following mission statement: " to inspire and facilitate community investment in the Johnson Creek Watershed for the protection and enhancement of its natural resources" (Johnson Creek Watershed Council).

Long Tom Watershed Council is the council for the Long Tom Watershed. The Long Tom Watershed is a tributary of the upper Willamette River Basin. It starts from its headwaters in the Coast Range Mountains, passes Fern Ridge Reservoir and heads to the Willamette River. The whole watershed covers 262,872 acres, 92% of which is privately owned. Long Tom Watershed Council is a 501(c)(3) nonprofit organization. It was initiated in 1996 by community members and organized formally in 1998 with a charter. It has the following mission statement: "to improve water quality and watershed conditions in the Long Tom River Basin through education, coordination, consultation, and cooperation among all interests, using the collective wisdom and voluntary action of our community members" (Long Tom Watershed Council).

The Tualatin River Watershed Council is the council covering the Tualatin River Watershed. The Tualatin River Watershed is located in northwest Oregon. It flows through Portland, Hillsboro, Tigard and Beaverton, to areas near Scholls, Gaston, Banks, Mountaindale and North Plains, then to the forests of Oregon's Coast Range, Tualatin Mountains and Chehalem Mountains. The whole watershed contains 453,493 acres and 93% of them are privately managed. The council was officially recognized by the Washington County Board of Commissioners in 1996 and obtained 501(c)(3) nonprofit status in 2004. The council has the following mission statement: "To foster better stewardship and understanding of the Tualatin River Watershed resources; address natural resource issues; and ensure sustainable watershed health, functions, and uses" (Tualatin River Watershed Council).

The Yamhill Basin Council is the council for the Yamhill Basin Watershed. The Yamhill Basin is composed of eight subwatersheds, which are located in Yamhill, Polk, Tillamook, Lincoln, and Washington Counties. The whole watershed drains 529,510 acres, 89% of which is privately owned. The Yamhill Basin Council was formed in 1995. According to their charter, the council seeks to "conduct and coordinate education, outreach, and promotion of watershed information; coordinate monitoring, assessment, and action plan projects; obtain funding for watershed projects and act as a forum for bringing stakeholders together" (Yamhill Basin Council).

The last case in Group 1 is the Walla Walla Basin Watershed Council. The Walla Walla Basin Watershed ranges among areas in the southeastern corner of the state of Washington to the northeastern corner of the state of Oregon. Ninety percent of the 1,126,198 acres in this watershed is privately owned. The watershed group was recognized by Umatilla County on May 18, 1994, and it has 501(c)(3) nonprofit status. Its mission is to "protect the resources of the Walla Walla Watershed, deal with issues in advance of resource degradation, and enhance the overall health of the watershed, while also protecting, as far as possible, the welfare, customs, and cultures of all citizens residing in the basin" (Walla Walla Basin Watershed Council).

Group 2 represents six watershed councils, whose land is primarily publicly managed. McKenzie Watershed Council is the first case in Group 2. The McKenzie River is a tributary of the Willamette River, located in west Central Oregon. It passes through three wilderness areas on the western slope of the Cascade Mountains. Seventy

percent of the 832,000 acres in the watershed are publicly managed. Lane County and Eugene Water and Electric Board (EWEB) initiated the blueprint for the McKenzie Watershed Council in 1991. It then was approved in 1994, and its charter was last amended in 2007 to increase resident representatives. This nonprofit group identifies its mission as follows: "To foster better stewardship of the McKenzie River Watershed resources, deal with issues in advance of resource degradation, and ensure sustainable watershed health, functions and uses. The Council will accomplish its mission through fostering voluntary partnerships, collaboration and public awareness" (McKenzie Watershed Council).

The Upper Deschutes Watershed Council is the council for the upper Deschutes River Watershed. The upper Deschutes River flows through 2,051,817 acres in Central Oregon, 70% of which is publicly owned. Since 1996, the Upper Deschutes Watershed Council (UDWC) has been organized to serve the watershed and its surrounding community. The council became a 501(c)(3) nonprofit organization in 1997. It has the following mission statement: "The Upper Deschutes Watershed Council seeks to protect and restore the upper Deschutes River Watershed through collaborative projects in watershed stewardship, habitat restoration and community awareness" (Upper Deschutes Watershed Council).

The Harney County Watershed Council manages a watershed covering over 6 million acres in southeast Oregon. Most of the basin is utilized for agriculture, with 73% of the lands being administered by federal and state agencies. The council is a

501(c)(3) tax-exempt nonprofit organization now located in Burns, Oregon. It is committed to these three goals: "determine the health of individual watersheds or watershed segments, retain the health of high quality watersheds, and restore and enhance those watersheds, or portions thereof that can be improved" (Harney County Watershed Council).

The Sandy River Basin Watershed Council is the council for the Sandy River Basin Watershed. The Sandy River ranges from the upper slopes of Mt. Hood, drains the western Cascades in Oregon, and flows into the Columbia River near the City of Troutdale. The Bull Run River, an important tributary of the Sandy, provides high-quality water to the City of Portland. The whole watershed has 325,120 acres and 76% of them are publicly administrated. The Sandy River Basin Watershed Council was founded in 1997 as a 501(c)(3) nonprofit corporation. It has the following mission statement: "The watershed council is a partnership: individuals and organizations work cooperatively to improve the health of the watershed for fish, wildlife and people. We coordinate our efforts with many private and public sector partners to produce the greatest benefits for the watershed" (Sandy River Basin Watershed Council).

The Nestucca-Neskowin Watershed Council was organized for the Nestucca-Neskowin Watershed, which is located on the northern coast of Oregon. It covers approximately 217,085 acres, 70% of which are public lands. The Nestucca Watershed Council was organized in 1995 and approved by the Tillamook County Commissioners in 1996. After expanding the council to include the Neskowin Watershed in 1997, its

name was changed to the Nestucca-Neskowin Watersheds Council (NNWC). It has the following mission statement: "to provide a forum for public participation and education regarding decisions that affect those who live, work and recreate in the watersheds, now and in the future" (Nestucca-Neskowin Watershed Council).

The Applegate Partnership and Watershed Council covers the Applegate Watershed. The Applegate River is located in Medford, Oregon. The Applegate partnership was initiated in 1992. The Applegate River Watershed Council, as a subcommittee of the Applegate Partnership, was recognized by the state and local governments in 1994. The partnership is a 501(c)(3) nonprofit organization and "supports management of all land within the watershed in a manner that sustains natural resources and that will, in turn, contribute to economic and community well-being and resilience" through community involvement and education (Applegate Partnership and Watershed Council).

In terms of watershed landownership, Group 3 stands between Group 1 and Group 2. The percentage of publicly managed land of the six watersheds is approximately 50%. The Little Butte Creek Watershed Council governs the Little Butte Creek Watershed, which is located in the southern Cascade Range. It originates from the top of Mt. McLoughlin and flows to the Rogue River, draining approximately 238,598 acres, 48% of which are public lands. The Little Butte Creek Watershed Council was formed in 1993 and incorporated as a 501(c)(3) nonprofit organization in 1996. It has the following mission statement: "to improve and maintain the health, beauty,

productivity, and quality of life of Little Butte Creek Watershed" (Little Butte Creek Watershed Council).

The Partnership for the Umpqua Rivers was organized for the Umpqua Basin Watershed. The Umpqua Basin shares the same general geographic boundary as Douglas County. It covers 2,996,000 acres, of which 54% are public lands. The Partnership for the Umpqua Rivers was formed in 1992 as the Umpqua Basin Fisheries Restoration Initiative (UBFR), then changed its name to the Umpqua Basin Watershed Council (UBWC) in 1997. Finally, it reconfirmed its name as the Partnership for the Umpqua Rivers (PUR) in 2005. In addition, the partnership was incorporated as a 501(c)(3) nonprofit organization in 2000. Its mission statement contains three parts: "Through collaboration with diverse participants, the Partnership for the Umpqua Rivers maintains and improves water quality & fish populations from source to sea in the streams of the Umpqua." They "educate people about the value of healthy streams," "work with willing landowners to improve stream conditions," and "monitor the health of the streams and their fish populations." As a whole, "through these actions the Partnership contributes to the ecological and economic well-being of the basin" (Partnership for the Umpqua Rivers).

The Powder Basin Watershed Council is the council for the Powder Basin. The Powder Basin Watershed passes through three drainages—the Brownlee Reservoir (Pine Creek, Halfway), the Burnt River, and the Powder River subbasins—and finally reaches the Snake River. Fifty-five percent of this watershed's 2,150,400 acres is publicly

managed. The Powder Basin Watershed Council is registered as a 501(c)(3) nonprofit group. It has a mission "to be committed to the goal of retaining, restoring and enhancing the health of our watersheds in accordance with all applicable laws and regulations" (Powder Basin Watershed Council).

The Seven Basins Watershed Council is available for the Seven Basins Watershed. The Seven Basins Watershed drains approximately 261,000 acres in the Rogue River Valley of Southern Oregon. Forty percent of the land is public. The council was initiated in 2001 after the dissolution of the Evans Creek Watershed Council. Its mission statement, formulated in 2002, aims "To bring together diverse interests, to implement programs and projects, to promote education; to maintain and/or improve the social, economic and ecological conditions of the Seven Basins Watershed and its citizens" (Seven Basins Watershed Council).

The Siuslaw Watershed Council is the council for Siuslaw River Basin. The Siuslaw River Basin is located on the Central Oregon Coast. It flows from the Lorane Valley and the Low Pass in the east through the Coast Mountain Range to Florence, the Dunes, and the Pacific Ocean in the west. It covers an area of 504,000 acres, 59% of which are public administrated. The council is a 501(c)(3) nonprofit organization and "supports sound economic, social, and environmental uses of natural and human resources in the Siuslaw River basin; and encourages cooperation among public and private watershed entities to promote awareness and understanding of watershed

functions by adopting and implementing a total watershed approach to natural resource management and production" (Siuslaw Watershed Council).

The Middle Rogue Watershed Council was organized for the Middle Rogue Watershed. The Middle Rogue Watershed is in the middle reach of the Rogue Watershed, located in three Oregon counties: Douglas, Jackson and Josephine. The watershed contains 388,000 acres and 61% of it is public. The council was established in 1994, with a part-time coordinator, and has been developed continuously since 1999. It is a 501(c)(3) nonprofit organization with the following mission statement: "to provide for the well-being of the natural environment and human community by promoting responsible stewardship of the Middle Rogue Watershed through community involvement" (Middle Rogue Watershed Council).

In sum, this chapter provides a brief introduction of the Oregon watersheds and associated councils involved in this research, including location, size and ownership of watershed, as well as its history, the nonprofit status of councils and their mission statements. Using this elementary acquaintance as a basis, the next chapter will promulgate a deeper understanding of the stakeholder involvement and public outreach strategies applied by these watershed councils.

CHAPTER V

STUDY RESULTS

Chapter Overview

A sample of eighteen watershed councils for this study was categorized into three groups based on landownership: an action group (private land $\leq 25\%$), an organizational group (percentage of public land $\geq 70\%$), and an in-between group (percentage of public/private land $\approx 50\%$). The analysis of these cases focuses on their stakeholder involvement and public outreach strategies. Both comparison and identification are used to measure mission statements, organizational governance, board member representatives, board member recruitment, and decision-making processes, as well as meetings, community events, watershed events, invitation and tracking, and outcomes measures.

Results from the analysis reveal that watershed councils use different stakeholder-involvement strategies based on their types. However, not much related difference was found in public outreach strategies; both action and organizational councils share many common approaches of public outreach strategies.

Mission

A mission statement is the central idea that orientates all the strategy planning and practice of an organization. To reach the ultimate goal, the group plans strategies, implements efforts and measures the outcomes for evaluation and amendment of those current strategies. Therefore, a look at mission statement could help understand the reasons for their strategies.

For example, the Johnson Creek Watershed Council recognizes a mission "to inspire and facilitate community investment in the Johnson Creek Watershed for the protection and enhancement of its natural resources" (Johnson Creek Watershed Council). The Long Tom Watershed Council serves "to improve water quality and watershed condition in the Long Tom River Basin through education, coordination, consultation, and cooperation among all interests, using the collective wisdom and voluntary action of our community members" (Long Tom Watershed Council).

In contrast, the McKenzie Watershed Council wants "to foster better stewardship of the McKenzie River Watershed resources, deal with issues in advance of resource degradation, and ensure sustainable watershed health, functions and uses." The mission statement also promises that "The Council will accomplish its mission through fostering voluntary partnerships, collaboration and public awareness" (McKenzie Watershed Council). And the Sandy River Basin Watershed Council claims that "the watershed council is a partnership: individuals and organizations work cooperatively to improve the health of the watershed for fish, wildlife and people. We coordinate our efforts with

many private and public sector partners to produce the greatest benefits for the watershed" (Sandy River Basin Watershed Council).

In addition, there are diverse mission statements within in-between group. For example, "Through collaboration with diverse participants, the Partnership for the Umpqua Rivers maintains and improves water quality & fish populations from source to sea in the streams of the Umpqua" (Partnership for Umpqua Rivers). And the Middle Rogue Watershed Council seeks "to provide for the well-being of the natural environment and human community by promoting responsible stewardship of the Middle Rogue Watershed through community involvement" (Middle Rogue Watershed Council). In addition, the Little Butte Creek Watershed Council has a simple mission statement: "to improve and maintain the health, beauty, productivity, and quality of life of Little Butte Creek Watershed" (Little Butte Creek Watershed Council).

All 18 councils share a similar ecological goal to protect and/or restore watershed health. However, they have different target audiences (see Table 2). Action councils always target community members or individual stakeholders, want to help them acquire a better understanding of watershed, and facilitate cooperation among them. In contrast, organizational councils put emphasis on a form of partnership. They pursue better stewardship/management of the whole watershed as well as public education and awareness. Additionally, according to their mission statements, in-between groups target either of the two audiences.

TABLE 2. Analysis of Mission Statements

Group number	Mission statement	
	Ecological goal	Target audience
#1. Calapooia Johnson Creek Long Tom Tualatin River Yamhill Basin Walla Walla Basin	Watershed Health	-Community members □ provide opportunities to membership □ inspire and facilitate community investment □ use the collective wisdom and voluntary action of community members. □ bring stakeholders together □ protecting the welfare, customs, and cultures of all citizens residing in the basin.
#2. McKenzie Upper Deschutes Harney County Sandy River Basin Nestucca-Neskowin Applegate Partnership	Watershed Health	-Partnership □ fostering voluntary partnerships, collaboration and public awareness □ collaborative projects in watershed stewardship, habitat restoration and community awareness □ individuals and organizations work cooperatively □ involving industry, conservation groups, natural resource agencies, and residents
#3. Little Butte Creek Umpqua River Powder Basin Seven Basins Siuslaw Middle Rogue	Watershed Health	-Either of the two above □ collaboration with diverse participants □ bring together diverse interests □ encourages cooperation among public and private watershed entities □ promote responsible stewardship of the Middle Rogue Watershed through community involvement

Organizational Governance

A nonprofit watershed council often establishes a board of directors, an executive committee, and other subcommittees as necessary. The board of directors is in charge of fiduciary responsibility and stakeholders' empowerment. The executive

committee implements board decisions, provides direction and support to staff, evaluates implementation, and takes care of grant, contractor and staff issues.

A difference concerning the outreach governance has been seen in the subcommittees' setting. Organizational councils always put an Education and Outreach Committee (E&O) in charge of outreach governance, but most of the action councils and in-between councils don't have an outreach committee (see Table 3). Public outreach governance in the action group is partaken by different subcommittees. For example, the Calapooia Watershed Council established a board of directors, a management committee (executive committee), a project committee and a nomination committee. Its project committee supports landowner outreach by providing technical and other assistance to staff who are working with the community directly. In addition, the nomination committee offers nominations for positions on the board of directors and also works closely with community members. In contrast, for watershed councils in the organizational group—like the McKenzie Watershed Council, for example—education and outreach demand is recognized and mainly governed by the Education and Outreach Committee, and is a matter of relatively less concern to the other subcommittees. Councils in the in-between group use either of the two governance mechanisms for public outreach.

The reason for the establishment of different subcommittees is that watershed councils are implementing different methods of outreach governance. Organizational councils adopt a more traditional way of governance than action councils. They

TABLE 3. Public Outreach Governance

Group number	Public outreach governance
#1. Calapooia Johnson Creek Long Tom Tualatin River Yamhill Basin Walla Walla Basin	The entire council is involved into the public outreach. -Any committee considers outreach as its mission, including the Management Committee, Nominations Committee, Personnel Committee and so on. For example: □ Project Committee provides needed technical assistance and supports to staff for the development of landowner outreach strategies □ Land Use Committee protects watershed by engaging community members in watershed monitoring and protection □ Search Committee is responsible for identifying candidates willing to volunteer for the Steering Committee
#2. McKenzie Upper Deschutes Harney County Sandy River Basin Nestucca-Neskowin Applegate Partnership	-Organizational watershed councils are implementing a more traditional way of outreach governance. -Outreach governance is perceived as a single task for a subcommittee. □ Education and Outreach committee □ Outreach Committee □ Technical Advisory Committee (TAC) □ Education and Outreach Subcommittee
#3. Little Butte Creek Umpqua River Powder Basin Seven Basins Siuslaw Middle Rogue	-Either of the two ways of outreach governance listed above: □ Technical Advisory Committee □ Seven Basin Neighborhood Fire Planning Project steering committee □ The Environmental Education Committee □ The Outreach Committee □ The Council may appoint Committees or Special Work Groups to assist in achieving its outreach objectives.

perceive public outreach as only a task that needs to be done, and a strategy that can help the organization's management. In contrast, action councils see outreach as their natural mission, and a priority for all different sections within the council.

Board Member Diversity

As an example of collaborative interaction, watershed councils involve and try to balance the diverse interests within the watersheds. These interest groups are represented by staffing the board of directors of the watershed councils. Six categories were identified through an examination of board members' background in all eighteen watershed councils (see Table 4). Although each watershed council has its own categorization of interests, this six-category system applies to all of them. The six categories of interests represented by watershed councils are (1) agriculture, (2) education and academia, (3) residents, (4) industry and business, (5) government, and (6) recreation and environment.

Six categories of interests were identified in the eighteen watershed councils. These categories represent all of the interests within the watersheds, although there are some nuances concerning each council. Each category refers to several related interest groups. For instance, the agriculture interest stands for farmers, ranchers, range, irrigated/dry-land/upriver agriculture, livestock, and SWCD. Education interest is represented by students, the educational community, the academic or scientific sector, and public educators. The recreation and environmental group includes environmental groups, the conservation community and nonprofit recreation.

TABLE 4. Six Categories of Interests Identified

Group 1.	Calapooia	Johnson Creek	Long Tom	Tualatin River	Yamhill Basin	Walla Walla Basin
Agriculture	-Rancher; -Grass seed producer; -Nursery; -Farms; -Soil and Water Conservation Districts -Irrigation District; -Agriculture-at-Large					
Education/ Academic	-Educator; -University					
Resident	-Property owner; -Resident; -Citizen-at-large; -Tribes					
Industry/ Business	-Timber; -Small Woodland business; -Agriculture Industry; - Homebuilders/Development; - Chambers of Commerce; -Lumber Company					
Recreation/ Environment	-Environmental Organization; -Fisheries; -Parks and Recreation					
Government	-City; -County; -State; -Federal; -Utility					
Group 2.	McKenzie	Upper Deschutes	Harney County	Sandy River Basin	Nestucca-Neskowin	Applegate Partnership
Agriculture	-Agriculture; -Ranch; -Weeds production					
Education/ Academic	-Formal educator; -Education					
Resident	-Resident; -Landowners; -Tribe; -Concerned citizen					
Industry/ Business	-Private timber; -Business					
Recreation/ Environment	-Recreation provider; -Environmental advocates; -Land trust; -Conservation organization; -River Recreation					
Government	-Local government; -State; -Federal (BLM, USF, ODF, ARS advisory)					
Group 3.	Little Butte Creek	Umpqua River	Powder Basin	Seven Basins	Siuslaw	Middle Rogue
Agriculture	-Agriculture; -Livestock; -Ranching					
Education/ Academic	-Academic/Scientific; -Public Education					
Resident	-Member at Large; -Tribe; -Local landowners; -Citizen					
Industry/ Business	-Private Business; -Small wood owners					
Recreation/ Environment	-Fishing; -Recreation; -Sporting; -Recreational Fishing; -Wildlife; -Environmental					
Government	-City; -Special District and Public Utilities; -State; -Federal (U.S. Forest Service)					

The board of directors is filled with individual stakeholders from the associated community or representatives of participating organizations/agencies. To ensure the diversity of stakeholders, all the councils at the action level and five of six councils in the in-between group establish positions. They establish positions by jurisdiction, interest, or by double standards: first by areas, then interest. For example, the Long Tom watershed council establishes positions by subwatershed: three positions for each subwatershed, including the Lower Long Tom, Upper Long Tom, Amazon Creek and at-large (see Table 5). Concerning each subwatershed, the council is trying to involve different interests, although those in the agriculture interest group occupy more positions. However, four out of six councils at the organizational level do not establish positions for board recruitment.

TABLE 5. Long Tom Board Member Diversity

Geographic areas	Agency/organization	Position
Lower LT	Stroda Bros. Farms	Owner/operator
Lower LT	Freepons Farm	Owner/Operator
Lower LT	Unknown	Unknown
Upper LT	Campus Meadow Farms	Poodle Creek
Upper LT	City of Veneta	City Administrator
Upper LT	McFarland Cascade	Resource Manager
Amazon	EWEB	Water Resource & System Planner
Amazon	City of Eugene	Natural Resources Manager
Amazon	ODFW	Ecologist
At Large	Rosboro Lumber Co	Forester
At Large	USACE	Stewardship
At Large	Oregon Trout	Regional Education Coordinator

Board Member Recruitment

Generally the recruitment process includes recommendation of candidates, an informal or formal application procedure, and a decision-making process. For example, the Long Tom Watershed Council chooses board members from its own membership. Membership is open to anyone associated with the watershed and its resources. The only requirement for a member is to participate in council activities. They use a mailing list referring to membership. Anyone who signs up after the activities will be on the mailing list and probably will become new members. In addition, the Calapooia WSC in the action group and the Seven Basins Watershed Council and Siuslaw Watershed Council (SWC) in the in-between group implement inclusive membership, but only board members have votes on board decisions.

In the case of the Tualatin River Watershed Council, council members' stakeholder groups are requested to provide representatives. If there is no organized stakeholder group, council members and/or the Coordinator will provide recommendations. Citizen-at-large representatives submit an application to the Steering Committee. The Harney County Watershed Council follows a less formal recruitment procedure. Members are recruited through word of mouth. Current council members make suggestions, or invite potential members to council meetings. And some other members are attracted to the council through mass media advertising.

There are many watershed councils—e.g., the McKenzie Watershed Council—that involve representatives of organizations/agencies as well as resident members. The

organization/agency chooses representatives for the council. If the current staff is not able to continue to serve, the council will request that the organization/agency nominate a replacement. Otherwise, the council will seek representation from another organization/agency with similar interests. To recruit resident members, staff or representatives at the table will provide recommendations. The Executive Committee will review applications and recommend candidates for council approval.

Most members of the Powder Basin Watershed Council's are recruited from government agencies and private organizations (see Table 6). And some resident members apply for membership after council activities or are attracted through mass media or personal recommendations.

Generally, these watershed councils are implementing two channels to update resident members and representatives of organizations/agencies. To recruit a new partner member, representatives of government or organizations are chosen by their respective agencies and approved by the board. To replace an existing member, the partner agency or organization is supposed to nominate a replacement. Recruitment of resident members is relatively complex. A complete procedure was identified from the 18 watershed councils. First, the board identifies interests and skills in need of strengthening and produces a guide. The board appoints or forms a subcommittee such as a nominating committee. Potential candidates are nominated and then are identified and interviewed by a nominating committee, executive committee or other appointed committee. Then a final decision is made based on the interview results.

TABLE 6. Board Member Recruitment

Group Number	Candidate sources	Procedures	Approve
#1. Calapooia Johnson Creek Long Tom Tualatin River Yamhill Basin Walla Walla Basin	- Membership -Interested Individuals -Council member stakeholder groups suggest representatives	-Two channels are used: □ the agency or organization stakeholder chooses a representative or nominates a replacement for the council □ the board of directors appoints or forms a subcommittee to recruit resident members -Less iormal process	-Board of directors decides -Full council approves
#2. McKenzie Upper Deschutes Harney County Sandy River Basin Nestucca-Neskowin Applegate Partnership	-Representatives from organization or agencies - Interested residents	-Tow channels are used as described above -Less formal process	-Council decides -County Commission approves
#3. Little Butte Creek Umpqua River Powder Basin Seven Basins Siuslaw Middle Rogue	-Membership -Interested Individuals -Staff from agencies or organizations	-Tow channels are used as described above -Less formal process	-County Commission approves -General members vote on election of board members

However, issues regarding where candidate are chosen from and who makes final decisions involve subtle or slight degrees of difference. First, potential candidates are chosen from different resources. More councils in the action and in-between groups

implement both membership requirements and board member recruitment. Membership is open to anyone who has interest in the watershed or anyone concerned about watershed issues, but only council members are eligible to become board member candidates. Councils in the in-between group use either of the two strategies. Then, different bodies make the final recruitment decisions in different councils. In some councils, the board makes the decision by consensus. In some councils, the full body of general members elects new board members. In some other cases, a council commission approves the decision.

Decision-Making Process

The watershed councils examined in this study primarily implement two approaches to decision-making (see Table 7). First, council collaboration is an effort of consensus-building through reconciling interests among different stakeholders. They seek "unanimous agreement." Watershed councils also use a power-based decision-making procedure that follows fair rules (McKinney 2001, 33-36)—e.g., use of the majority vote as a major or supplementary resolution rule.

As seen in Table 7, the majority of the councils make decisions by consensus in general. All the councils in the action group and more than four out of six councils in the in-between group apply consensus consistently. The only two exceptions use consensus part of the time. The Powder Basin Watershed Council makes its decisions by consensus, but elections are by majority. The Partnership for the Umpqua Rivers

uses consensus minus one. However, only two out of the six councils in the organizational group make decisions by consensus, but most of them use a simple majority vote to make decisions. For those councils using consensus, majority vote is used as an alternative only if consensus fails.

TABLE 7. Decision-Making Strategy

Council number	Decision approach	Resolution rule
Group 1.		
Calapooia	Consensus	Unknown
Johnson Creek	Consensus	If fails, use vote as an option
Long Tom	Consensus	If fails, use vote as an option
Tualatin River	Consensus	Use vote as an option
Yamhill Basin	Consensus	If fails, vote by a 2/3 majority
Walla Walla Basin	Consensus	Unknown
Group 2.		
McKenzie	Consensus	Unknown
Upper Deschutes	Unknown	A simple majority vote
Harney County	Unknown	A simple majority vote
Sandy River Basin	Consensus	Available, but never used.
Nestucca-Neskowin	Unknown	A simple majority vote
Applegate Partnership	Unknown	A simple majority vote
Group 3.		
Little Butte Creek	Consensus minus one	Unknown
Umpqua River	Unknown	A simple majority vote
Powder Basin	Consensus (make decisions)	A simple majority vote (elections)
Seven Basins	Consensus	If fails, the chair can call for a vote
Siuslaw	Unknown	Unknown
Middle Rogue	Consensus	If fails, use vote as an option

In addition, the Johnson Creek Watershed Council and McKenzie Watershed Council develop consensus-building into a seven-level system: "wholeheartedly agree," "good idea," "supportive," "reservations," "serious concerns," "strong objections"/"cannot participate in decision," and "recusal" (Johnson Creek Watershed Council; McKenzie Watershed Council). Among the several levels that might influence final decision, the "serious concerns" can live with the decision, but the "strong objections" will work to block it. The last level, "recusal," will not affect the council's attempts to reach consensus because members who recuse themselves will abstain from participating at any level of consensus-building. The seven-level system ensures a more subtle decision-making process by taking into consideration all the subtle differences of members' opinions.

In addition, a council must make sure comprehensive discussion occurs during the consensus-building process so that all voices from council members can be heard. If consensus fails to coalesce, two alternative options are often available. First, further discussion is encouraged. The council tables the item for a while for more discussion later or when new information becomes available. If consensus still cannot be reached, a super-majority vote might be conducted, especially when the issue is time sensitive and critical, or if any representative requests such a vote.

As an example, the Long Tom Watershed Council forms an ad-hoc team after failure to reach consensus, and this team includes at least one member who objects to the decision. The team works by meeting, discussing and reporting back to the council.

If consensus-building fails again, the team will use a super-majority vote (70%) to decide which option will be used for that issue: a super-majority vote or tabling of the issue for further suggestions.

In summary, the study results above were achieved primarily through comparing different types of watershed councils. Theses results reveal how stakeholder-involvement strategies relate to watershed councils focused on the action level compared to those focused on the organizational level. In addition, there are more results about public outreach strategies. However, not much difference was found in public outreach strategies among different types of councils. Instead, diverse approaches were identified for each public outreach strategy, including meetings, community events, watershed events, invitation and tracking, and measures of public input.

Meetings

Regarding meetings, the only difference found by this study is that organizational councils provide fewer meeting opportunities for council members and communities than the other two groups. The case study found that councils used four different types of meeting: board meetings, subcommittee meetings, annual meetings and other special meetings (see Table 8). The board meeting (also called a council meeting) is always open to all council members, although only board members can participate in decision-making. Subcommittee meetings are often held by subcommittees to take care of more specific issues, like watershed restoration, outreach and education, or implementation of

TABLE 8. Meetings

Council number	Board meeting	Subcommittee meeting	Annual meeting	Other meeting
# 1. Action group				
Calapooia	Monthly	As needed	Yes	Telecommunication
Johnson Creek	Monthly	Unknown	Yes	Unknown
Long Tom	Monthly	Bio-monthly	Yes	Unknown
Tualatin River	Monthly	Monthly	Unknown	Unknown
Yamhill Basin	Monthly	Unknown	Yes	Unknown
Walla Walla Basin	Monthly	Technical conferences	Unknown	Phone surveys and special meetings.
# 2. Organizational group				
McKenzie	Monthly	Unknown	Unknown	Unknown
Upper Deschutes	Bimonthly	Monthly Or Four times a year	Unknown	Unknown
Harney County	Monthly	Unknown	Yes	Unknown
Sandy River Basin	Monthly	Unknown	Unknown	Unknown
Nestucca-Neskowin	Monthly	Unknown	Unknown	Meetings on special topics throughout the year
Applegate Partnership	Monthly	Unknown	Unknown	Unknown
# 3. In-between group				
Little Butte Creek	Monthly	Monthly or as needed	Yes	Unknown
Umpqua River	Monthly	Monthly	Unknown	
Powder Basin	Monthly	As needed	Unknown	Teleconference and Electronic Communication
Seven Basins	Monthly	Unknown	Yes	Special meetings of the general membership
Siuslaw	Monthly	Monthly	Yes	Special meetings
Middle Rogue	Eleven regular meetings per year	Special meetings as needed	Yes	Unknown

projects. Moreover, annual meetings are like celebrations or parties for all council members, and even community members. These celebrations are a wonderful channel

for strengthening and expanding the existing relationship between council and community. The other type of meeting refers to meetings that use different technologies than traditional meetings do or irregular meetings on special topics. Such meetings are often used as a complement.

As seen in Table 8, most of the councils hold board meetings (or council meetings) monthly, no matter which group they belong to. The only two exceptions hold board meetings regularly, although not monthly. The Upper Deschutes Watershed Council has council meetings bimonthly, and the Middle Rogue Watershed Council provides eleven regular meetings each year. Subcommittee meetings occur regularly (monthly, bimonthly or four times a year) or as needed, including technical committee meetings, outreach committee meetings and executive committee meetings. More councils in Group 1 (four of six) and Group 3 (five of six) have subcommittees and annual meetings than Group 2 (four of six in Group 1 and Group 3 vs. one of six in Group 2).

In short, watershed councils in the action and in-between groups provide more opportunities of all kinds of meetings to council members and the watershed community. They organize meetings, provide space, and make announcements among council members, the community and even the public at large. One reason for less efforts by organizational groups on meeting strategy could be that many organizational councils have more representatives from organizations or agencies rather than resident members. Unlike community members living or working within the same watershed,

it's more difficult to schedule a meeting for members for Group 2 councils, who might live or work far away.

Community Events

Watershed councils participate in or host community events, no matter which group they belong to. Although there are differences among specific activities more or less, five common forms of community events are used to increase awareness of the councils throughout their communities: local fairs and events, annual celebrations and events, community meetings, educational and informational presentations, and resource assistance.

Many councils create and staff booths at local/community events. For example, the Middle Rogue Watershed Council staffs a public outreach booth at community events such as Frog O' Fairs, Take a Walk Along the Rogue, Tour in Time, the Master Gardener Fair, and October Fest. The Yamhill Basin Council participate in the Washington County Small Woodlands native plant sale, during which council members inform the public of information about native plants, invasive plant species, and make recommendations for addressing these issues.

Annual celebrations and events are another effective form of community event. The Applegate Partnership and Watershed Council holds fundraising events such as barbeques, wine tasting, and harvest fairs. And the Little Butte Creek Watershed Council holds an annual community barbecue and annual photo contests.

To improve linkage with their surrounding communities and increase awareness of community needs, the councils also attend existing community/group meetings. For example, the Johnson Creek Watershed Council attends networking events and neighborhood association meetings, and makes presentations. The Yamhill Basin Watershed Council coordinator attends local fishing organization meetings to recruit new members with expertise and volunteers.

Also, watershed councils offer educational and informational presentations to their communities. As well as staging presentations in local events and community meetings, they plan educational outreach for target audiences as well—e.g., high schools, landowners and other community groups—in the form of service learning opportunities, workshops, and presentations. For example, the Yamhill Basin Council sponsored a workshop on native plants for landowners and other workshops addressing issues like "low-impact development" and "wells, septic systems, and livestock waste handling."

Besides all of these efforts, watershed councils implement community outreach by offering resource assistance as well. For instance, the Johnson Creek Watershed Council provides technical assistance, volunteer labor, tools, meeting space, and plant materials to their community as needed, and the council also provides fiscal sponsorship for neighborhood groups.

Watershed Events

Watershed councils also organize watershed events to increase awareness of the value of its watershed and community concerns about it. Not much difference was found in the general forms of events adopted by the watershed councils examined, although they might organize different activities. Four common forms were identified: council displays, watershed educational opportunities, watershed day events, and watershed projects.

Watershed councils demonstrate their accomplishments through site visits, watershed tours, or site displays. For example, the Walla Walla Basin Watershed Council recognizes ground projects as the best advertisement for increasing local involvement. The Sandy River Basin Watershed Council sponsors tours each year and organizes hikes along rivers.

In addition, watershed councils provide watershed education during presentations, workshops, and/or classes. For example, the Walla Walla Basin Watershed Council organizes seminars, workshops, and school and college field trips. The council also assists watershed science education in K-12 classrooms. The Nestucca-Neskowin Watershed Council holds plant-propagation classes in which students have opportunities to plant native trees over a period of three years.

In practice, watershed education and council displays are always combined. As an important form of education and display strategy, watershed or project tours are adopted by almost all of the councils to give participants a direct and visual impression

of watershed issues and the council's accomplishments. Tours always follow presentations/workshops, since further instruction and discussion can help deepen their audience's understanding and help them provide effective responses to community feedback. Meanwhile, many councils cooperate with schools or colleges to expand their audience and link watershed science education with practice.

Moreover, watershed councils attract more voluntary participation in watershed issues through "watershed day events." For example, the Yamhill Basin Council organizes volunteers to participate in water-quality monitoring, blackberry-removal events, tree plantings, and stream cleanups. The Seven Basins Watershed Council schedules "volunteer work days," which attract the public to activities such as riparian tree planting, noxious-weed pulls, and fish-trap monitoring. These day events inform an expanded public of watershed activities, and might be able to develop more permanent members.

Lastly, during watershed outreach activities, some watershed councils put special attention on particular group stakeholders, such as students and landowners. Landowners are often targeted, especially when watershed issues are associated with private conservation. Besides informational education, councils often offer them technical assistance. For example, the Applegate Partnership and Watershed Council works with local landowners to expand application of conservation tools, like conservation easement and in-stream water leases to protect farmland threatened by development and to enhance stream flow.

Invitation and Tracking

The strategy of invitation and tracking is essential for a watershed council in its implementation of the whole package of outreach strategies, no matter if it is an action council or an organizational council. Although different channels are used to keep track of partner members and resident members, three common forms of tracking are used to update and retain resident stakeholder and public involvement: targeted stakeholder contact, public invitation, and regular tracking.

Watershed councils contact and invite individual stakeholders directly through personal networks, or by targeting certain areas or communities. According to current experience, council members' personal relationship/network is a stable source of interested members. Existing council members or staff members recommend friends, colleagues and neighbors. Sometime councils identify critical areas and then contact stakeholders referred to them. For example, the Nestucca-Neskowin Watershed Council determined in 2007 to recruit members and board candidates in the Pacific City area, then began contacting landowners/stakeholders in this area, sending mail and other informational materials, holding open house and following up on these efforts. Sometimes councils contact leaders of community groups and expand their relationship with more individuals through them. For example, the Applegate Partnership and Watershed Council claims that they are connected to a single community that it

identifies, contacts and informs directly. The council provides all kinds of outreach events for this community.

In addition, public invitations often occur at council meetings, community events, watershed events and other public activities or sites, such as Farmers' Market. The watershed councils provide invitation tables, informational material, and sign-up booths. For example, the Siuslaw Watershed Council organizes public events such as Native Plant Distribution, Siuslaw Watershed Exploration Camps, and Community Forums, which attract new general community members every year.

The watershed councils follow-up on the recruitment of new members by using "regular tracking." Once an audience is registered as members or sign up as volunteers, the councils also try to retain existing members. Monthly mailings, E-mail lists, and newsletters are frequently used. For example, the Middle Rogue Watershed Council publishes a semi-annual newsletter informing members of the status of ongoing and proposed projects, a calendar of volunteer events, and other related news about the watershed. They also publish an Annual Report that includes more details about accomplishments and finances. All this information is accessible to members, volunteers and the general public.

Measures of Public Input

To ensure the effectiveness and efficiency of all these outreach strategies, it is necessary for all the watershed councils to measure the outcomes of their outreach

strategies regularly. Public input is an important indication of the outcomes of outreach strategies. Generally, public input is measured by participant population, events, hours, and other accomplishments. For instance, education-measuring considers classes, workshops, classroom presentations, community service projects, brochures, and tabloids. Outreach could be measured by number of newsletters, presentations to potential partners, community meetings, booths and tours. No large difference was found among the items the three groups are using to measure public input, but these efforts are organized differently.

According to the eighteen cases, watershed councils organize the measuring in a classification of general public input, "Education and Outreach" project input and public input in on-the-site restoration projects. Ten of the eighteen watershed councils involved in this study record public input as outcomes of outreach projects, five of them measure public input in both outreach projects and restoration projects, and three of them only keep general descriptions.

Both general public input and input in "Education and Outreach" projects focus on outcomes of stakeholder and public participation in outreach activities, but the latter one organizes outreach projects and records associated outcomes. For example, the Long Tom Watershed Council measures outreach input and member involvement in the form of evaluation of a "Public Learning and Involvement Program." The Seven Basins Watershed Council measures public outreach and input by four projects: education, outreach, events, and council development.

The last part of public input measuring is incorporated into accomplishment of on-the-site restoration projects. The purpose of these watershed issues projects is clearly aimed at the health of the watershed through restoration and protection, but stakeholders or volunteers are involved.

CHAPTER VI

CONCLUSION AND RECOMMENDATIONS

Current Watershed Efforts in China

As mentioned in Chapter I, one important motivation of this study is to extract the experience of collaborative watershed management for China. NPOs have evolved and expanded since the 1970s in China and environmental NPOs (ENPOs) have emerged since the 1990s. Since then, ENPOs have become some of the most active nonprofit organizations in China (Wang 2000, 19), such as Friends of Nature and China Water Pollution Map. Friends of Nature is the oldest environmental NPO in China (Friends of Nature, 2009) and China Water Pollution Map is the first organization that exposes water polluters to the public, and encourages social monitoring of watersheds (China Water Pollution Map, 2009).

Although few research studies have been conducted concerning collaborative environmental management in China, some attention has been given to the relationship between nonprofit organizations and the government. Before the 1970s, most of the social organizations in China were affiliated closely with the government. The government established social organizations and supported them with resources, staff and financial assistance. However, these organizations were actually "part of the state

apparatus. Their role turned out to be not so much representing their constituencies as transmitting the party line to them" (Young and Woo 2000, 22).

Since the 1970s, the real nonprofit organizations in China have been growing both in number and variety, and they are often categorized, based on their sponsorship by the government, as NGOs, GONGOs and semi-NGOs (Schwartz 2004). Along with the development, then, two new regulations were issued by the central government of China in 1998, including Regulations for the Registration and Management of Social Organizations and Regulations for the Registration and Management of People-Run Non-Enterprise Institutions. These regulations established the basic legal framework for NPOs in contemporary China. However, the regulations bring more restrictions than encouragement for nonprofit organization's development in China (Wang 2000, 21). The value of collaboration hasn't been realized or emphasized in practice.

Therefore, experience from watershed councils in Oregon would be inspiring for watershed management in China. Specifically, Oregon's collaborative experience in stakeholder involvement and public outreach would produce a working model for both watershed nonprofit managers and related agency officers.

A Complete Outreach Model

Based on the study results in Chapter V, a complete package of stakeholder involvement and public outreach strategies has been recognized. The package includes a mission statement, organizational governance, board member diversity and recruitment

methods, decision-making principles, and several public outreach strategies (e.g., meetings, watershed events, and community events), invitation and tracking approaches, and measures of outcome. The package also incorporates common outreach strategies and different stakeholder-involvement strategies adopted by different typologies of watershed councils.

First of all, the mission statement for a watershed group advocates improving watershed health by increasing public input. However, different types of councils target different "audiences." Watershed collaboration at the action level emphasizes the involvement of community members/individual stakeholders in the statement, while those at the organizational level claim to use the form of partnerships. Such a mission statement orientates all the council's planning and practice, and the difference is reflected in the various strategies of direct stakeholders' involvement.

Concerning governance, in general, organizational watershed councils implement more traditional methods of outreach governance than action watershed councils. An organizational council perceives outreach as a singe task, and appoints a subcommittee in charge of that, such as an education subcommittee. An action council often doesn't establish an education committee or outreach committee, but the entire subcommittee devote itself to public outreach activities. Outreach is one of the priorities for all of the sections within the council. For example, the project committee works closely with landowners and volunteers interested in on-the-site projects. And the

technical committee provides technical assistance to the watershed community or individuals.

In addition, it is important to ensure the diversity of board members as well as general council members. Representatives of diverse interest groups are involved, including groups advocating for agriculture, education/academia, industry/business, government, and recreation/environment. Some of them are individual stakeholders, like resident members representing themselves, and others are representatives of organizations/agencies stakeholders, nominated by the respective organization/agencies, and are responsible for them.

Individual stakeholders are recruited by the council, but organization/agency representatives are often nominated by their organizations/agencies. To ensure the diversity of interest at the table, action councils establish positions and then search for stakeholders to fit each seat, but organizational councils often don't do that. Instead, to a certain degree, organizational councils' recruitment depends on what organization/agencies are involved in the collaboration.

Decision-making is another critical channel for direct involvement. Equal accessibility to vote for or object to a decision is essential for a stakeholder to defend the represented interest. Most watershed councils make decisions by consensus. They seek full agreement after adequate discussion, with voices from all of the stakeholders. Some of the councils use a seven-level system of consensus that provides members options to represent different opinions. Only if the consensus fails do watersheds table

the item for further discussion or adopt a super-majority vote to produce a decision.

Concerning public outreach, a variety of meetings, community events and watershed events provide comprehensive opportunities for the public to gather in the name of watersheds. Four types of meetings are used: board meetings, subcommittee meetings, annual meetings and other special meetings. Usually, a monthly board meeting is recommended for all councils. Subcommittee meetings, which can be monthly, bimonthly or as needed, have discussions about specific watershed issues, including technical or grant issues. An annual meeting is usually used by action-level watershed collaborations. These are often annual celebrations that gather all members together. Other special meetings, held via telephone, the Internet, or other technologies, are a complementary option when regular meetings are not possible or an extra meeting is needed.

To carry out community events, a council could attend community or neighborhood meetings, give informational presentations, workshops, or seminars to its community, schools, landowners and the public at large. As needed, councils could also offer resource assistance to the associated community. Therefore, the strategy of community events increases the community's awareness of the council, reveals their interdependence on each other, and stresses the affiliation between them.

Moreover, watershed events include accomplishment demonstrations, watershed education, watershed day events, and watershed projects that are planned to improve the

community's understanding of their watershed, encourage public action, and engage the public in watershed restoration and protection.

To support the implementation of all of these strategies, watershed councils need to retain and update participants by applying various forms of invitation and tracking. Watershed councils invite targeted stakeholders directly through personal networks or by contacting certain areas/communities. They invite the general public to council meetings, community events, watershed events and other public activities or sites. To track their contact lists and inform participants of activity announcements, watershed councils for a stakeholder use monthly mailings, E-mail lists, and newsletters.

Lastly, it is important to conduct "outcomes measures." Since influence on public behavior or behavior change is unmeasurable, instead, it's more feasible to measure public input, such as population of participants, working hours and number of projects. In the measurement of public input, there are three options. A general description of public input is good if the councils do not have education or outreach projects. Otherwise, a council records public participation in "education and outreach" projects and public participation in on-the-site projects.

In short, a package of direct involvement and public outreach strategies are drawn from watershed councils' experience in Oregon, and a range of forms of them are identified for other watershed groups.

Several Related Themes

In addition to the practical working model, several theoretical themes arise from the study results about outreach governance, multilevels of public participation and social networks and organizational networks in watershed councils.

Outreach Governance in Watershed Councils

As seen in mission statements, subcommittees settings, meetings and other activities, organizational councils adopt a more traditional way of governance than action councils. Organizational watershed councils use different forms of partnership to involve more organizations, agencies and residents. They have clear division of responsibilities among different sections within the council. They establish specific subcommittees for public outreach, such as an outreach committee, education committee, or outreach and education committee. Public outreach is perceived as only a single task on the agenda for a subcommittee, which is more like the method that agencies use to attract the public to activities they organize.

In contrast, according to their mission statements, action watershed councils focus on community members, citizens, interested residents or other individual stakeholders. Public outreach is one of the final goals that orientates all of their strategy planning and implementation. Although they do not establish specific subcommittees in charge of outreach, the entire councils devote themselves to outreach implementation. Therefore, public outreach is exactly what action watershed councils are doing daily.

For example, action watershed councils host more meetings for council members and communities than organization councils. In the annual meetings, watershed councils review the accomplishments of outreach as well as celebrate watershed health improvement with the public.

Multilevel Public Participation in Watershed Councils

The second theme is about multilevels of public participation in watershed councils. Watershed councils provide various opportunities of public participation, such as informing, education, consultation, and the power to influence the result, which are revealed in study results regarding the decision-making process, meetings, community events, watershed events, and so on.

According to Arnstein's eight-level-participation model (Arnstein 1969, 217), an action council is an example of citizen control, because community members control final decisions directly. An action watershed council is basically a citizen-controlled group, and the majority of the stakeholders at the table to make decisions are watershed community residents, so that the public achieves dominant authority through the decision-making process.

In contrast, an organizational council is an example of delegated power, because citizens are empowered to negotiate with agency or organization representatives through the form of partnership. During the decision-making process in organizational watershed collaboration, a citizen is given equal access to decision-making compared to

organizational/agency representatives. They are empowered to be able to negotiate and make trade-offs with public officials through the decision-making process, so that residents' interests will be taken into consideration as well as state or federal interests in the public decision.

Moreover, seats for making decisions are limited, but informing/education and consultation can reach the general public as broadly as possible. That's why all the watershed councils make copious efforts to increase public outreach as well as direct involvement. As an example, although only board members are able to vote, most of the watershed councils are open to the public. Through outreach activities, watershed councils establish a foundation for deeper public participation. The watershed public is informed of their "rights, responsibilities, and options" (Arnstein 1969, 219) and receives technical assistance during the council meetings, watershed events or community events. They are prepared to be candidates for the board of directors, who make decisions representing all of the stakeholders.

In short, watershed councils in Oregon implement multilevel public-participation strategies, provide opportunities for information sharing, education, and consultation, and confer the power to influence the result.

Social Networks and Organizational Networks for Collaborations

The last theme is about the value of social networks and organizational networks for implementing strategies. This information is revealed in mission statements, governance, board member recruitment, meetings and so on.

First, as seen from mission statements and outreach governance, action councils are more likely to reply to social networks than organizational councils, because an action watershed council emphasizes community members, and they need to communicate with the community in daily affairs. In contrast, organizational networks are more important to organizational watershed councils, since the form of governance they use is partnership. Technically, they engage in more communication with other organizations/agencies compared to individual stakeholders. However, any communication must be between individuals, so other social networks among representatives of organizations/agencies are also important for organizational watershed councils.

Moreover, there is often an existing social network among members of action watershed councils, because they live, stay or work in the same area where they grow up, make friends, and/or raise families. All of these existing social networks can be used to expand implementation of an action council's outreach. Potentially new members are brought to watershed collaborations via the recommendations of trustworthy agents. In contrast, organizational watershed councils reply more to organizational networks. Their daily activities are related to communication involving organizations and agencies

partners. Therefore, a good organizational network depends on each organization's commitment and the mechanisms/rules recognized by all the partners. Also social networks among the staff from different organizations/agencies are also critical to the communication.

In short, the interpersonal channel is more influential than mass media on stakeholders, because individuals incline to be influenced by group members, especially those sharing common identity with them. Therefore, social networks are significant for both action watershed councils and organizational councils. Action watershed councils make more efforts to retain and strengthen social networks within the watersheds, and organizational watershed councils build new social networks between representatives at the table as well as personal links with communities. An organizational network is especially important to an organizational watershed council because it implies how much effort each stakeholder group is willing to contribute to the collaboration that is the foundation for a partnership.

Each council member could be a "change agent" among his/her family, neighborhood, friends or other community groups; that's why social network serves as one of the indices for evaluation of board members. A board member with a valuable social network might bring various supports that will promote council development and the implementation of its projects.

Further Work

Based on the current conclusions, some further work is worth doing. First, an evaluation of these stakeholder-involvement and public-outreach strategies will help to reveal what strategies are more effective than others. Based on the evaluation, a refined model will have better practicability. Second, a study to apply these strategies to watershed collaborations in other areas will be significant. To personal interests and the current development of watershed management in China, I would like to apply these Oregon experiences to my home country and examine their applicability. However, a study of China's watershed efforts will be necessary before that.

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